

Tonga - Household Income and Expenditure Survey 2021

Tonga Statistics Department

Report generated on: January 12, 2023

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Overview

Identification

ID NUMBER
SPC_TON_2021_HIES_v01_M

Version

VERSION DESCRIPTION
Version 01: Cleaned, labelled and de-identified version of the Master file.

PRODUCTION DATE
2022-10-19

Overview

ABSTRACT
The 2021 Tonga HIES is the new update of this kind, after the 2015/2016, 2009 & 2001 versions. This survey aims to provide indicators on Household Living Standard using monetary aspect (amount of income and expenditure), non-monetary aspect (calory consumed, assets own, imputed rents...) and more social approach (education, health, food security status...). Survey outputs have multiple uses in various domains such as public health (food nutrition analysis), economic development (poverty), system of National Account (consumption aggregates), and they represent a key source of information to populate many National SDGs.

KIND OF DATA
Sample survey data [ssd]

UNITS OF ANALYSIS
Household and Individual.

Scope

NOTES
-HOUSEHOLD: Dwelling characteristics; Assets; Home maintenance; Vehicles; International trips; Domestic trips; Household services; Financial support; Other household expenditure; Ceremonies; Remittances; Food insecurity; Livestock and aquaculture; Agriculture; Legal services.

-INDIVIDUAL: Individual characteristics; Education; Health; Disability; Communication; Alcohol; Other individual expenses; Labour force; Fisheries and hunting; Handicraft.

TOPICS

Topic	Vocabulary	URI
pacific-skills, education, training		
pacific-skills, employment		

KEYWORDS
HIES, Expenditure, Income, Cash, Subsistence, Consumption, COICOP, PACCOI, Imputed rents, Food security, Disability, Agriculture, Fisheries, Remittances, Assets

Coverage

GEOGRAPHIC COVERAGE

National coverage.

UNIVERSE

Household Income and Expenditure Survey (HIES) covered all persons who were considered to be usual residents of private dwellings.

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Tonga Statistics Department	Government of Tonga

OTHER PRODUCER(S)

Name	Affiliation	Role
Statistics for Development Division	Pacific Community	Technical assistance
World Bank	World Bank Group	Technical assistance

FUNDING

Name	Abbreviation	Role
Tonga Statistics Department	Government of Tonga	Funding

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Statistics for Development Division	SDD	Pacific Community	Documentation of the study

DATE OF METADATA PRODUCTION

2022-08-29

DDI DOCUMENT VERSION

-Version 01 (August 2022): This is the first attempt at documenting the 2021 Tongan Household Income and Expenditure Survey (HIES). Done by the Statistics for Development Division (SDD) at Noumea.

DDI DOCUMENT ID

DDI_SPC_TON_2021_HIES_v01_M

Sampling

Sampling Procedure

The Tonga 2021 HIES sample design is based on a two stages sample design, where each stage corresponds to a random selection:

- Stage 1: random selection of census blocks (using the probability of selection proportional to size)
- Stage 2: random selection of households (from the selected blocks). Within each selected blocks, 12 households were randomly selected (uniform probability)

The survey aims to disseminate results at strata level where stratas are defined on geographical combination of provinces and urban rural areas. The sample sizes were calculated at the strata level, with the aim of minimizing the sampling error (and relative sampling error) within each strata.

The sampling frame used was the 2016 population census.

Response Rate

The final response rate including replacement from List B can be found below:

- Tongatapu urban: 95%
- Tongatapu rural: 93.3%
- Vava'u: 92.5%
- Ha'apai: 96.1%
- Eua: 99.2%
- Ongo Niua: 96.6%
- Total Tonga: 94.8%

Weighting

The final set of weights of the 2021 Tonga Household Income and Expenditure Survey (HIES) is the result of a multi-step process, given the following:

- Survey field procedure included replacement plan in the case of non response (absence, refusal...)
- Sampling weights are computed at the household level only
- The 2016 Tonga census was used as sampling frame for sample random selection of the 2021 Tonga HIES

- Step1: the first set of weights is directly computed using the probability of selection of the households at both stages of selection

- $P1 = k_i \cdot n_j / N_i$ Probability of selection of EA j in strata I where $k_i = \text{nb of EAs to select in strata } i$
- $n_j = \text{nb of hhs in EA } j$
- $N_i = \text{total nb of hhs in strata } i$
- $P2 = m / n_j$ Probability of selection of households in EA i where $m = \text{cluster size}$
- $n_j = \text{size of EA } i$

$P1 = \text{Probability of selection of EA using the probability proportional to size method}$

$P2 = \text{Probability of selection of households using the uniform probability}$

$W1 = 1 / (p1 \cdot p2)$ (first set of weights)

The extrapolation matches the 2016 Tonga census that was used

- Step2: both probabilities of selection have been re computed using the updated 2021 population census (that was conducted directly after HIES). Using the same formulas, $P1$ and $P2$ are updated and generate $W2$, the set of weights using updated census data.

Questionnaires

Overview

The 2021 Tonga Household Income and Expenditure Survey (HIES) questionnaire was developed in English and Tongan language and it follows the Pacific Standard HIES questionnaire structure. It is administered on CAPI using Survey Solution, and the diary is no longer part of the form. All transactions (food, non food, home production and gifts) are collected through different recall sections during the same visit. The traditional 14 days diary is no longer recommended in the region. This new method of implementing the HIES present some interesting and valuable advantages such as: cost saving, data quality, time reduction for data processing and reporting.

Only a sub sample of the selected HIES sample was asked to fill a 2-week diary (in addition to the core recall HIES questionnaire). But only the recall sections are used to compute the HIES outputs and aggregates, this sub sample HIES diary was made for research purposes.

Below is a list of all modules in this questionnaire:

- Household ID
- Demographic characteristics
- Education
- Health
- Functionality
- Communication
- Alcohol
- Other individual expenses
- Labour force
- Fisheries & hunting
- Handicraft
- Dwelling
- Assets
- Home maintenance
- Vehicle
- International trips
- Domestic trips
- Household services
- Financial support
- Other household expenditure
- Ceremonies
- Remittances
- Food insecurity
- Livestock & aquaculture
- Agriculture parcel
- Agriculture vegetables
- Agriculture rootcrops
- Agriculture other plants
- Agriculture fruits
- Legal services.

The survey questionnaire can be found in this documentation.

Data Collection

Data Collection Dates

Start	End	Cycle
2021-01-04	2021-11-30	Data collection

Data Collection Mode

Computer Assisted Personal Interview [capi]

Data Collection Notes

The field collection started in January 2021 until November 2021. A total of 7 teams were required to complete the field collection (3 in Tongatapu and 1 in each of the other provinces). Each team was made of 3 interviewer and 1 supervisor. On the 12 households interviewed per block, only 4 were asked to fill in the diary (in addition to the core HIES recall questionnaire).

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Data Collectors

Name	Abbreviation	Affiliation
Tonga Statistics Department	TSD	Government of Tonga

Data Processing

Data Editing

Once the data was collected using Survey Solutions, it was then edited on Stata (version 15).

Other Processing

The data was collected using the World Bank's tool Survey Solutions.

Data Appraisal

No content available

Documentation

Questionnaires

Questionnaire (English) - Tonga 2021 HIES

Title Questionnaire (English) - Tonga 2021 HIES
 Author(s) Tonga Statistics Department Pacific Community (SPC)
 Date 2021-02-01
 Country Tonga
 Language English

The 2021 Tonga Household Income and Expenditure Survey (HIES) questionnaire was developed in English and Tongan language and it follows the Pacific Standard HIES questionnaire structure. It is administered on CAPI using Survey Solution, and the diary is no longer part of the form. All transactions (food, non food, home production and gifts) are collected through different recall sections during the same visit. The traditional 14 days diary is no longer recommended in the region.

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Filename Tonga HIES 2021 CAPI final.pdf

Technical documents

Pacific Nutrient Database (PNDB) - Tonga 2021 HIES

Title Pacific Nutrient Database (PNDB) - Tonga 2021 HIES
 Author(s) Pacific Community (SPC)
 Date 2021-02-01
 Country Tonga
 Language English
 Description This file is the "Pacific Nutrient Database (PNDB)" of the 2021 Household Income and Expenditure Survey (HIES) of Tonga. It contains the coding hierarchy and nutrient information on each food item present in the survey.
 Filename PNDB(2020)_Database_v2_publish - COICOP.xlsx

COICOP and PACCOI classifications - Tonga 2021 HIES

Title COICOP and PACCOI classifications - Tonga 2021 HIES
 Author(s) Tonga Statistics Department
 Date 2021-01-01
 Country Tonga
 Language English
 Description This file contains the Classification of Individual Consumption by Purpose (COICOP) and Pacific Classification of Income (PACCOI) used in this survey. The COICOP classification is used for expenditure while PACCOI is used for income.
 Filename Tonga_COICOP_PACCOI - final.xlsx

ISIC and ISCO classifications - Tonga 2021 HIES

Title ISIC and ISCO classifications - Tonga 2021 HIES
 Author(s) Tonga Statistics Department
 Date 2021-01-01
 Country Tonga
 Language English
 Description This file contains all the International Standard Industry Classification (ISIC) and International Standard Occupation Classification (ISCO) codes that are used in this survey.
 Filename Tonga_ISCO_ISIC.xlsx
